

MD:tmp 03/02/04 P0540

PATENT

REMARKS**Status of the Claims:**

Claims 11, 14, 15, 16, and 20 have been cancelled to expedite prosecution and to narrow the issues for appeal. Applicant reserves the right to pursue claims of commensurate scope in one or more related applications.

Claims, 1, 5, 13, 18, 19, and 21 are hereby amended to put the claims in a better form for appeal.

Claims 1, 3-6, 8-10, 13, 19, 20, 21, and 23-26 are now pending in the application, of which claims 1 and 21 are in independent form.

The amendments being made herein correct typographical and grammatical errors, correct dependency relationships due to a canceled independent claim, and also put the claims in a better position for appeal and/or allowance.

Claim 1 was amended to correct a minor grammatical error ("the" instead of "a") and a minor typographical error (the extra phrase "is viewed" that was inadvertently inserted after "viewing party knows the second confidential location and views said second printed matter"). These two minor errors appeared to result in a rejection under 35 U.S.C. 112, and Applicants appreciate the Examiner bringing this to Applicants' attention.

Claim 5 was amended to correct a minor typographical error (changing the phrase "said tone" to "said tone difference" to be consistent with the phrase immediately preceding it, namely "said light tone and said darker tone constituting a tone difference").

Claims 13, 18, and 19 were amended to depend from claim 1 instead of cancelled claim 11.

Claims 1 and 21 were amended to recite that a comparison of the second printed matter to the first printed matter is capable of determining the authenticity of the identification document.

All claims as amended are supported throughout the Application, Claims, Figures, and Specification as originally filed. No new matter has been added, and Applicants believe no new issues are raised.

MD:imp 03/02/04 P0540

PATENT

Initial Remarks

Under "Response to Arguments," the Office Action states that "Applicants arguments filed on June 5, 2002 have been fully considered but they are not persuasive". Applicants respectfully note that the most recent response they filed was in the instant case was dated August 26, 2003. Applicants assume that this reference in the Office Action was an inadvertent error and that the Office Action is, in fact, referring to the response filed on August 26, 2003. Applicants did not file any actions in the instant case on the date of June 5, 2002.

The 112 Rejections

Claims 1, 3-6, 8-11, 13-16, and 18-20 each stand rejected under 35 U.S.C.112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 11, 14, 15, 16, and 20 have been cancelled, thereby mooting the rejection of these claims.

As to claim 1, it appears that several typographical errors that Applicants made in the previous amendment apparently rendered the meanings of this claim unclear to the Examiner. Claim 1 has been amended to correct these typographical errors, thereby mooting this rejection. Applicants thus respectfully request that the rejection of claim 1 as being unpatentable over 35 USC 112 be withdrawn.

As to dependent claims 3-6, 8-10 (each of which depended from claim 1) and 13, 18, and 19 (each of which originally depended from claim 11, now cancelled, and now depend from claim 1), the Office Action has provided no reasons why such claims are indefinite and why such claims fail to point out and distinctly claim the subject matter. No form paragraphs were included as to the deficiencies of these claims. As required by MPEP section 706.03(d), Applicants respectfully request that the Examiner provide a full explanation of the deficiency of these claims under 35 USC 112. Applicants would appreciate the Examiner's identification, as suggested in MPEP 706.03(d) of the particular term(s) or limitation(s) which render these claim(s) indefinite and a statement as to why such term or limitation renders each claim indefinite. In particular, Applicants note that the recitation in claims 13, 18, and 19 is completely unchanged from what the recitation had been going into the prior Office Action dated 3/26/2003. None of these claims were rejected under 35 USC 112, paragraph two, in the prior Office Action

MD:imp 03/02/04 P0540

PATENT

dated 3/26/2003 as being indefinite. These claims had not been amended in the previous response dated 8/26/2003. Thus, Applicants are unclear why these claims are now being rejected as indefinite.

Applicants suggest that it is possible that the inclusion of claims other than claim 1 in this rejection was an inadvertent error, because the only specific information as to indefiniteness was provided in relation to claim 1. If this is the case, the Applicants respectfully request that the rejection of claims 3-6, 8-10, 13, 18, and 19 under 35 USC 112, second paragraph be withdrawn.

The 103 Rejections

Claims 1, 3-6, 8-10, 13, 18, 19, 21, and 23-26 are now pending in the application and all are rejected in the above-identified Office Action. Claims 1 and 21 are the independent claims in this application.

All rejections now standing in the application are under 35 USC 103(a) as being unpatentable over UK Patent GB-2159461A ("the UK patent") in view of US 1428278 to Dow ("the Dow patent") and further in view of Richardson (4239261) ("the Richardson patent").

As to claim 1, the Examiner contends in the rejection that the UK patent teaches all elements of claim 1 except (a) minimal contrast hiding printed matter from the naked eye wherein the printed matter and a background color are printed in various hues; (b) that the second printed matter conveys the same identifying information as the first printed matter; (c) that the second printed matter is placed at a second secret or confidential location spaced from the first location; (d) that the second printed matter is unresolved unless the viewing person knows the second confidential location; and (e) wherein second printed matter is viewed using a magnification lens. The Office Action states that "the UK reference is relied upon for disclosing the use of printing information at a second scale to conceal the second printed matter information".

The rejection then states that the Dow patent teaches minimal contrast as recited in claim 1, and that it would be obvious to modify the UK patent with the Dow patent to include minimal contrast hiding between two colors, for purpose of preventing the document from being counterfeited. The Office Action also later states that "The Dow reference is relied upon for

MD:lrmp 03/02/04 P0540

PATENT

disclosing color variation between a first and second printed matter wherein there is minimal contrast between the two colors.”

Applicants again maintain that there is no suggestion in either reference to modify the UK patent with the Dow patent, as the Examiner suggests, nor would it be obvious to one skilled in the art to be motivated to modify the UK patent. As Applicants will explain below, neither the UK patent nor the Dow patent provides any teaching or suggestion to make the claimed combination, and, because there would be no reasonable expectation of success (in fact, there most likely would be a failure), it is not clear how one skilled in the art would find the motivation to combine the teachings of the UK patent and the Dow patent.

In addition, MPEP 2143.01 states that a proposed modification cannot change the principle of operation of a reference. As will be explained further below, modifying the UK patent with either the Dow patent or the Richardson patent (or both of them) would significantly change its principle of operation.

Claim 1, as amended, recites:

A self-authenticating identification document comprising:

first printed matter rendered at a first location on said document and at a first scale enabling said first printed matter to be resolved by a viewing person without magnification, said first printed matter conveying identifying information;

second printed matter comprising information that communicates the same identifying information as said first printed matter, the second printed matter rendered at a second microscale and at a second confidential location on said document and in a second color, said second microscale being significantly smaller than said first scale, said second confidential location being spaced from said first location and being selected and arranged to be a location that is not generally known, and said second color being selected to effect minimal contrast between said second printed matter in said second location and its immediate background;

wherein the combination of said minimal contrast, said second confidential location, and said second microscale is constructed and arranged to substantially hide the existence and location of said second printed matter from the naked eye and prevent said second printed matter from being substantially detected or resolved unless a

MD:imp 03/02/04 P0540

PATENT

viewing party knows the second confidential location and views said second printed matter using a magnification lens; and

wherein a comparison of the second printed matter to the first printed matter is capable of determining the authenticity of the identification document.

Applicants respectfully submit that, based on claim 1 as amended, the Examiner's rejection does not establish a prima facie case for obviousness. As Examiner knows, the requirements for a prima facie case of obviousness are set forth in MPEP 706.02(j) and MPEP 2143 and require that:

1. **There must be a suggestion or motivation to modify the references, either in the references themselves or in the ordinary skill in the art.**
2. **There must be a reasonable expectation of success; and**
3. **The combination of references must teach all elements of the claim expressly or inherently.**

The combination of references does not teach or suggest "minimal contrast"

As to claim 1's element of "minimal contrast", Applicants again repeat their earlier observation that the Dow reference does not teach use of printing information so as to have "minimal contrast" with its immediate background. Claim 1, as amended, states that the minimal contrast of the second color (in combination with the second scale that is a microscale, and the confidential location) helps to substantially hide the existence and location of the second printed matter from the naked eye. Dow, however, teaches away from a minimal contrast (or any contrast) – Dow is describing the use of inks that look the same to the naked eye as another ink but that would look completely different from that ink when viewed using **specific specialized equipment** used to bring out specific optical properties of the ink (see Col. 1, line 44 through col. 2, line 76). The specific equipment mentioned--spectroscopes or equivalent equipment that is sensitive to true or fundamental colors— have nothing to do with magnification, are not the same thing as a magnification lens, and thus are completely different than what is described in the pending claims as amended.

MD:imp 03/02/04 P0540

PATENT

Based on the disclosure in the Dow reference, mere magnification of the ink of Dow would not make the minimal contrast visible, because even under magnification, Dow's inks would still look like the same color—there would be no “minimal contrast” (or other contrast) to the naked eye. As Dow expressly states, one would need the “proper apparatus” (col. 1, lines 18-19), namely the spectroscope or equivalent equipment. that is sensitive to true or fundamental colors, to detect the difference between the two identical colors. Thus, it is not seen how one skilled in the art would have a reasonable expectation that modifying the UK reference with the Dow reference would be successful in achieving “minimal contrast”.

The Office Action has cited the Richardson reference for teaching use of a magnification lens to read data and for teaching that information can be provided at a confidential location. However, the Richardson reference still does not compensate for the deficiencies of the UK and Dow references as to minimal contrast. Richardson never teaches or suggests selecting colors to achieve minimal contrast with a background color (as a way to help to hide the existence and/or location of a piece of information). Rather, Richardson describes attaching an encoded marker or label to an article “in such a manner that it is not readily visible except to an educated observer” where there is a “lack of knowledge as to the exact location of the marker” (col. 3, lines 50-60). The only teaching or suggestions in Richardson of a so-called “manner” of attaching and/or providing the marker such that it will be “not readily visible” is to provide a label that is “sufficiently small in size so as to be substantially invisible to the casual observer when mounted on the article to be identified” (col. 4, lines 27-30). The Examiner points out that Richardson describes use of fluorescent substances (UV or IR), which can be made visible when exposed with a specialized light source, as helping to provide a confidential location for a marker applied to an article, but Applicants note that such covert materials are not described or illustrated as having “minimal contrast” with any other colors on the article. Richardson never teaches using minimal contrast as a way to substantially hide the location of information and/or the information itself.

No motivation to modify UK Reference to have minimal contrast

Second, assuming *arguendo* that either Dow or Richardson (or some combination thereof) somehow can be shown to teach the “minimal contrast” of claim 1 (and Applicants

MD:imp 03/02/04 P0540

PATENT

respectfully submit that neither Dow nor Richardson teaches or suggest "minimal contrast"), Applicants note that there still would be no suggestion or motivation, either in the references themselves or in the art, to modify the UK patent by having "minimal contrast" between colors. The UK patent discloses providing or printing on a bank or credit card an area of microfilm or microprint containing data, which area is shown and described to be completely visible to the naked eye. The entire area (e.g., piece of the microfilm) is not hidden in any way (see FIGS. 1 and 2 of the UK patent). Although the items of individual data that are contained the microfilm or microprint data itself that is contained within the piece is itself not ascertainable to the naked eye, the presence and location of where this microfilm data is on the card is illustrated in the UK patent to be ascertainable to the naked eye. In fact, being able to readily locate where the data is, so that the data can be put into an appropriate reader, appears to be a is a fundamental principle of operation of the UK patent during "normal use" (see col. 1, line 125 through col. 2, line 23 of UK patent).

Furthermore, the UK patent expressly states that the microfilm or microprint cannot be ascertained by the naked eye (even with the aid of a magnifying lens) and that a specific type of reader (e.g. a microfilm projector or an epidiascope (col. 2, line 10 of UK patent)) is required. The UK patent does not teach or suggest that further measures (e.g., using colors that look different under specialized equipment in the manner of Dow, or color alteration measures generally) would be advantageous, desirable, or necessary to prevent fraudulent use or forgery of cards containing its microfilm feature. Similarly, the UK patent is thoroughly silent as to the need to hide the location and/or existence of the microfilm data, such as by keeping the location confidential and/or by forming it onto the document so as to have minimal contrast with its immediate background. As the UK patent explains, the microfilm itself, by its nature of requiring a special reader or projector, is unreadable to a naked eye, even if the naked eye is using a magnification lens. Further hiding by changing colors (or, putting it in a confidential location) would not be an obvious improvement to the UK patent and might, in fact, change the principle of operation of the UK patent so much as to unusable. This is explained further below.

MD:imp 03/02/04 P0540

PATENT

No reasonable expectation of success even if UK Patent modified to have minimal contrast

Moreover, it appears that the UK patent cannot even be modified so as to have “minimal contrast,” as recited in claim 1. Thus, modifying the UK patent with Dow and/or Richardson, to attempt to achieve the “minimal contrast” of claim 1, would have no reasonable expectation of success (and, in fact, would appear to fail). In one embodiment of the UK patent, the microfilm (which is never taught or suggested to be “invisible” to the naked eye) is placed in a clear window (col. 1, line 40 through col. 2, line 77). This structure would not meet claim 1’s requirement that the second printed matter be in a second color the “second color being selected to effect minimal contrast between said second printed matter in said second location and its immediate background”, because the background is clear. In that situation, it is not seen how the minimal contrast of claim 1 could be achieved. In addition, in the other disclosed embodiment in the UK patent, the microfilm is placed on a “white or other suitable light colour” (col. 1, line 89) backing and covered with a “clear transparent plastic film” (col. 1, lines 104-105). The light backing is necessary to view the microfilm in reflected light (col. 1, lines 85-95). However, the microfilm/microprint of the UK patent is illustrated (FIGs. 1 and 2) as being a conventional type of microfilm -- rather dark, and not white or light colored. Minimal contrast again would not and could be achieved.

Note that the UK patent never teaches or suggests “hiding” its microfilm/microprint in a background of a similar or minimally contrasting color. This is because one needs either transmitted light (putting microfilm over a clear background) or reflected light (putting microfilm over a white or light background) to be able to ascertain the information on the microfilm. A color that is of a similar intensity, darkness, or hue to the microprint would render it difficult to impossible to be able to read the information. One skilled in the art would recognize that such a modification would have no reasonable expectation of success. Thus, Applicants again fail to see how one skilled in the art would be motivated to modify the UK patent with the Dow reference.

In addition, because the microfilm is not taught or suggested to be anything other than conventional microfilm or microprint, Applicants believe that its location and existence (if not its content) would be visible to the naked human eye, and thus could not be a “confidential” location as recited in claim 1, as amended, even if the UK reference were combined with a

MD:Imp 03/02/04 P0540

PATENT

reference that allegedly teaches putting information in a covert location. In the UK patent, public knowledge of the existence and/or location of the microfilm information appears to be an important aspect of the UK patent, since the UK patent's example of an intended use states that a mere "counter clerk" in a "retail establishment" would be able to check the information in an appropriate reader (col. 2, lines 14-23).

Modifying the UK Patent with Richardson would change principle of operation of UK patent

The Examiner also contends that Richardson teaches claim 1's recitation that the printed matter can be provided so as to be viewable with a magnification lens (if the confidential location is known). However, as Applicants noted in an earlier response, MPEP 2143.01 states that a **proposed modification cannot change the principle of operation of a reference**. Applicants again respectfully submit that modifying the UK patent so that the printed matter can be ascertained by a naked eye with the aid of a magnification lens explicitly **changes the principle of operation** of the UK patent. The UK patent expressly states that its microprint information "*cannot be ascertained or readily ascertained by the naked eye (even with the aid of a magnifying lens)*" (see col. 2, lines 127-130). The microprint of the UK reference has this quality because the card of the UK patent is specifically constructed and arranged to have this information be viewable only using a special viewer—not a magnifying lens (see FIG. 1 of the '461 patent as well as col. 1, lines 45-77 and col. 1, line 127 to col. 2, line 10). Thus, Applicants respectfully suggest it is improper to modify the UK patent with Richardson because doing so would fundamentally change the way the UK patent's disclosure operates. Such a modification is neither taught nor suggested in any of the references of record. It is not seen how one skilled in the art would be motivated to modify the UK patent to provide information that is viewable using a magnification lens when the UK patent so clearly teaches away from providing information that can be viewed using a magnification lens.

In stark contrast, in the present invention, the second printed matter of claim 1 as amended is specifically described as being able to be resolved using a magnification lens. This provides the advantage (as stated in the Specification at page 1, lines 1-5) of being able to determine the authenticity of an identification document produced in accordance with the invention in a cost efficient manner (through use of low cost equipment such as a magnification

MD:imp 03/02/04 P0540

PATENT

lens). Both this feature and its use are entirely different from that described for the microprint (3) of the '461 patent. The microprint (3) of the '461 patent is read by inserting the portion of the card containing the microprint (2) into a special reader or projector then reading the information in greatly enlarged form on a screen (see col. 2, lines 4-23). For this reason Applicants further submit that the microfilm or microprint information of the UK reference is not even equivalent to the "second printed matter . . . rendered at a second microscale" of claim 1, as amended. Thus, Applicants again submit that the proposed combination does not teach all of the elements of the claim, expressly or inherently.

The combination of references does not teach the "first printed matter" and "second printed matter" of claims 1 and 21

Claims 1 and 21, as amended recite that the first printed matter is printed at a first location on the identification document, at a first scale that enables it to be resolved by a viewing person without magnification and that a comparison of the first printed matter to the second printed matter (which printed matter is substantially hidden from the naked eye because of its minimal contrast, confidential location, and small size) can determine the authenticity of the identification document. None of the references of record teach or suggest a first and second printed matter that can have this functionality.

The Office Action does not appear to cite any references for claims 1's recitation that the second printed matter "*compris[es] information that communicates the same identifying information as said first printed matter . . . wherein a comparison of the second printed matter to the first printed matter is capable of determining the authenticity of the identification document.*"

The Office Action states that the UK patent discloses the first printed matter of claims 1, and 21 when the UK patent recites that the "holder's serial number and name and also the validity dates" are embossed onto the front of the card, at col. 2, lines 120-125. This recitation is not, however, equivalent to the first printed matter of claim 1 and serves a different function. During operation, the serial number and name of embossed on the UK patent is not compared to the microfilm information to determine the fraudulent use or forgery of the card in the UK patent. Rather, the microfilm is compared to information that is not part of the card itself (e.g., a

MD:imp 03/02/04 P0540

PATENT

stored microfilm duplicate, stored at a location outside of the card) to make such a determination. This is a very different function than that done by the first printed matter in claims 1 and 21, as amended.

The Office Action states that "a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art . . . if the prior art structure is capable of performing the intended use, then it meets the claim." Applicants contend that the structure of the UK patent, whether or not modified by Dow and/or Richardson, is not capable of performing the intended use. Even if the serial number and name embossed on the front of the card were also replicated in the microfilm, the UK structure would still fail to function identically to the invention as recited in claims 1 and 21, as amended, because the microfilm/microprint of the UK patent (which the Examiner contends is the same as the "second printed matter") is not ascertainable using a magnification lens. This is completely opposite the second printed matter of claims 1 and 21, as amended).

Additionally, Applicants respectfully contend that having second "hidden" printed matter convey the same personalized information as other non-hidden personalized information on the card, where the hidden printed matter is viewable using a magnifying lens, is a novel and non-obvious structural feature that enables the identification document to be a self-authenticating document (see Applicants' specification at page 3, lines 1-24 and also claims 1 and 21, as amended). The feature is structural because it requires that printing (or other marking of the card) be formed in a particular place, at a particular size, using a particular color of printing medium that is selected have minimal contrast with a background at the particular location, and having a particular content of information that is also present elsewhere on the card.

Applicants also submit that none of the prior art structures, taken alone or in combination, are capable of performing the intended use of the invention as described in claims 1 and 21, as amended. For example, the base structure of the UK patent requires that its microfilm be compared to something outside of the card itself – a stored duplicate microfilm, or the physical details of the person presenting the card (see col. 2, lines 1-24). The UK patent neither teaches nor suggests that its microprint information (3) is there to communicate the same identifying information as information printed elsewhere in the card. In the UK patent, the microprint

MD:hmp 03/02/04 P0540

PATENT

information (3) is described as providing details on the authorized holder, such as a photograph, medical data, account number, etc. (see col. 1, lines 107-119). This information is not described as being printed in visible (to the naked eye) form anywhere else on the card, which is understandable because much of the microprint information (3) is described as personal information such as bank account information, credit limit, medical records, etc. The other (visible) information on the card is described in the '461 patent as being embossed information such as the holder's serial number, name, validity dates, and/or holography. Modifying the base structure of the UK patent with either Dow or Richardson (or both) does not result in the invention as recited in claims 1 and 21, as amended.

Likewise, the structure of Dow cannot provide the authenticating function of claims 1 and 21, as amended, whether taken alone or combined with the UK patent. Dow merely described a type of printing where a portion of the printing can have the same color as another portion but look different when viewed through an appropriate instrument. The Dow and Richardson references do not compensate for these deficiencies in the UK patent.

Request for withdrawal of Rejections of claims 1 and 21 and all claims dependent therefrom

Thus, for at least the reasons above, the UK, Dow, and Richardson references, taken alone or in any combination, fail to teach or suggest all of the elements of independent claims 1 and 11 as amended (and of all claims dependent therefrom, namely claims 3-6, 8-10, 13, 18, 19, and 23-26). In particular, these references fail to teach at least the minimal contrast, first printed matter, and second printed matter of claims 1 and 21, as amended (and all claims dependent therefrom). Thus, for at least the reasons discussed above, Applicants maintain that claims 1 and 21, and all claims dependent therefrom, namely claims 3-6, and 8-10, 13, 18, 19, and 23-26) are patentably distinguishable over the art of record, whether taken alone or in combination, and are in a condition for allowance. Applicants respectfully request that the rejection of these claims over the UK patent in view of Dow and Richardson be withdrawn.

Closing Remarks

As noted in the first page of this Amendment and Response after Final, this Amendment and Response after Final accompanies a Notice of Appeal. Applicants believe that all pending

MD:imp 03/02/04 P0540

PATENT

claims are patentably distinguishable over the art of record and are in a condition for allowance. Applicants believe that entry of the amendments herein will put the claims in better form for appeal, will be very simple, and that no additional searches will be necessary. Favorable consideration and an early notice of allowance are hereby respectfully requested. Should the Examiner have any questions, he is invited to contact the undersigned at 781-744-6404.

This Amendment and Response after Final is being faxed to the USPTO Central Facsimile Number of 703-872-9306 on March 2, 2004, together with a Notice of Appeal. No extension of time fees are believed to be due, but if any fees are due in the instant application, please charge such fee to PTO Deposit Account No. 50-2535.


Date: March 2, 2004

Digimarc Corporation
19801 SW 72nd Avenue, Suite 250
Tualatin, OR 97062

Telephone: 781-744-6404
FAX: 503-885-9880

Respectfully submitted,

DIGIMARC CORPORATION

By 
Marianne McLaughlin Downing
Registration No. 42,870